

## **REMARKS**

Applicant and the undersigned have carefully reviewed the first Office Action of March 12, 2007 in the subject U.S. patent application. In response, the majority of the claims pending in the application have been amended. It is believed that the claims now pending in the application are in condition for allowance. Reexamination and reconsideration of the application, and allowance of the claims is respectfully requested.

The subject application discloses, and claims a method which is usable for detecting early phases of neuro diseases. A principal one of these is Parkinson's disease. However, the method of the subject invention is usable to detect early phases of a number of neuro diseases. In accordance with the present invention, the speech of a human subject, and typically only several words of such speech, is converted into corresponding electrical signals. These signals are processed, as recited in claim 1 to determine a spectral envelope of the resultant signal. As seen in Fig. 2, that spectral envelope is depicted by dashed lines and may take on the appearance of a two-humped canal, as discussed in the specification. A central depression separates the two shoulder peaks which form the two humps, again as may be seen in Fig. 2. An amplitude of this depression is compared to an average level of the two shoulder peaks. A ratio of the amplitudes of the depression to the levels of the two shoulder peaks is determined. That ratio is then used for identifying and measuring a neurological manifestation, in the speaker's voice, of an early phase of a neuro disease. The ratio determined in accordance with the present invention can be multiplied by a constant K to determine a Parkinson's Severity Index. Such an index can be used to

quantify a degree of a progression of a patient's disease as a percentage of fully developed Parkinson's disease. The subject's spoken words can be converted using telephony computer boards or by a suitable neurological disorder detection apparatus, as depicted schematically in Fig. 1.

In the first Office Action of March 12, 2007, claims 1-14, all of the claims pending in the application, were rejected under 35 USC 101 as being directed to non-statutory subject matter. More specifically, it was asserted that claims 1-14, as filed, were directed to a mathematical algorithm, per se. The claims were asserted as merely reciting steps of converting a subject's spoken word to ultimately arrive at a ratio, without any practical application being recited. It was further noted that the preamble of a claim is not given patentable weight because such a preamble recites the purpose of a process.

In response, claim 1 has been amended to add a positive recitation of using the ratio determined in the previous steps for identifying and measuring a neurological manifestation, in the speaker's spoken words, of early phases of neuro diseases. Claim 1, as amended, is believed to comply with 35 USC 101. The claimed invention is now directed to statutory subject matter since the recited method includes a practical application in the claimed recitation. Claim 1 has also been amended to place its language in better form and to provide uniformity of terminology. The majority of the other claims in the application, as filed, have also been amended to place them in better format and to conform their language to the language of currently amended claim 1. Several of the claims have been cancelled.

The Office Action did not include any art-based rejections. No prior art, in

addition to that submitted in the Information Disclosure Statement filed by applicant's attorneys, was cited. No discussion of the prior art cited by applicant is believed to be required.

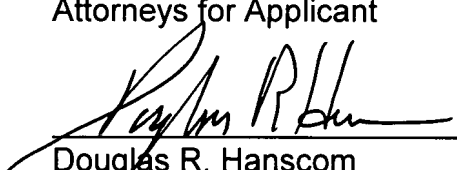
## **SUMMARY**

Claims 1-5, 7, 8 and 10-13 have been amended. Claims 6, 9 and 14 have been cancelled. It is believed that the claims now pending in the subject application comply with 35 USC 101 and are directed to statutory subject matter. Allowance of the claims, and passage of the application to issue is respectfully requested.

Respectfully submitted,

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